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Amendments to the claims:

Please cancel claims 1, 15, 22 and 43 to 46 without disclaimer or prejudice to applicants' right to pursue the subject matter of these claims in a future continuation or divisional application.

Claims 1-46 (canceled)

Please add new claims 47 to 52 as follows:

47. (New) A method of treating a subject suffering from an abnormality wherein the abnormality is alleviated by decreasing the activity of a human Y5 receptor comprising administering to the subject a therapeutically effective amount of a compound having the following structure:

$$R_8$$

wherein each R_1 is independently H, F, Cl, Br, -CN, -OH, -NO₂, -NR₅R₆, -SO₂R₅, -(CH₂)_nOR₅, -(CH₂)_nCONR₅R₆, -(CH₂)_nNR₅COR₅, perfluoroalkyl, polyfluoroalkyl, aminoalkyl, or straight chained or branched C_1 - C_7 alkyl;

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wherein R_5 is independently H; or straight chained or branched $C_1\text{-}C_7$ alkyl;

wherein R_6 is independently H; or straight chained or branched C_1 - C_7 alkyl;

wherein B is O, NH or S;

wherein X is CHR₅, O or NR₅;

wherein each n independently is an integer from 0 to 6 inclusive;

wherein R₈ is

$$-\stackrel{R_9}{\underset{r}{\bigvee}} \stackrel{r}{\underset{R_{10}}{\bigvee}} R_{11} \qquad \stackrel{\stackrel{\scriptstyle 0}{\underset{r}{\bigvee}} R_{10}}{\underset{\scriptstyle R_{10}}{\bigvee}} R_{11}$$

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wherein Y is C or N;

wherein R_7 is independently straight chained or branched C_1 - C_7 alkyl;

wherein R_9 is independently H; or straight chained or branched C_1 - C_4 alkyl;

wherein R_{10} is independently H; or straight chained or branched C_1 - C_4 alkyl;

wherein R_{11} is

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$$\begin{array}{ccc} \overset{\text{O}}{\underset{\text{II}}{-}} & \overset{\text{O}}{\underset{\text{II}}{-}} & \text{or} & \overset{\text{O}}{\underset{\text{II}}{-}} & \text{CH}_2)_{n} \text{OR}_{17} \\ \overset{\text{II}}{\underset{\text{O}}{-}} & \overset{\text{O}}{\underset{\text{II}}{-}} & \text{CH}_2)_{n} \text{OR}_{17} \end{array}$$

wherein R_{12} is H, straight chained or branched C_1 - C_7 alkyl, $(CH_2)_nOR_{17}$, or $O(CH_2)_uOR_{17}$; provided that when X is O, R_{12} cannot be methyl;

wherein R_{13} is independently H; $-(CH_2)_uOR_5$; $-(CH_2)_tCONR_5R_6$; $-(CH_2)_uNR_5COR_5$; $-(CH_2)_tCOR_7$; $-(CH_2)_tCO_2R_5$; $-(CH_2)_uNR_5R_6$; $-(CH_2)_uCN$; straight chained or branched C_1 - C_7 alkyl; C_1 - C_7 alkyl in which the C_2 - C_7 atoms may be optionally substituted with one or more F or Cl; C_3 - C_7 cycloalkyl- C_1 - C_7 alkyl; straight chained or branched C_2 - C_7 alkenyl or alkynyl; or C_3 - C_7 cycloalkyl; phenyl or C_1 - C_6 phenylalkyl; wherein the phenyl or C_1 - C_6 phenylalkyl may be substituted with one or more of F, Cl, -CN, $-NO_2$, $-NR_5R_6$, $-SO_2R_5$, $-(CH_2)_nCOR_7$, $-(CH_2)_nOR_5$, $-(CH_2)_nCONR_5R_6$, $-(CH_2)_nNR_5COR_5$, $-(CH_2)_nCO_2R_5$, $-(CH_2)_nSO_2NR_5R_6$, straight chained or branched C_1 - C_7 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl;

or R_{12} and R_{13} together with the amide linkage to which they are attached are pyrrolidinonyl, piperidonyl, or oxazolidinonyl; provided that when X is O, R_{12} and R_{13} cannot be oxazolidinonyl;

wherein R_{14} is H; straight chained or branched C_1 - C_4 alkyl; F; or $-(CH_2)_TOR_5$;

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wherein R_{15} is H, straight chained or branched $C_1\text{-}C_4$ alkyl, or F;

with the proviso that when R_{14} is -OH, R_{15} cannot be F;

wherein R₁₆ is NR₃R₄; perfluoroalkyl, unsubstituted straight chained or branched C_1 - C_7 alkyl; substituted straight chained or branched C_2-C_7 alkyl, wherein the C_2-C_7 alkyl may be substituted with one or more of F, Cl, -CN, -NR $_5$ R $_6$, - SO_2R_5 , $-(CH_2)_nCOR_7$, $-(CH_2)_nOR_5$, $-(CH_2)_nCONR_5R_6$, $-(CH_2)_nNR_5COR_5$, - $(CH_2)_nCO_2R_5$, $-(CH_2)_nOCF_3$, pérfluoroalkyl, polyfluoroalkyl, or aminoalkyl, straight chained or branched C2-C7 alkenyl or alkynyl, or C₃-C₇ cycloalkyl or cycloalkenyl; phenyl, heteroaryl or C_1-C_7 phenylalkyl, wherein the phenyl, heteroaryl or C₁-C₇ phenylalkyl may be substituted with one or more of F, Cl, Br, -CN, -NO₂, -NR₅R₆, -(CH₂)_nNR₅COR₅, - SO_2R_5 , $-(CH_2)_nCOR_7$, $-(CH_2)_nOR_5$, $-(CH_2)_nCONR_5R_6$, $-(CH_2)_nCO_2R_5$, -(CH₂)_nSO₂NR₅R₆,ethylenedioxy, methylenedioxy, C₁-C₇ alkyl, perfluoroalkyl, or branched chained polyfluoroalkyl, aminoalkyl, straight chained or orbranched C2-C7 alkenyl or alkynyl, or C3-C7 cycloalkyl or cycloalkenyl; quinolinyl, 1-napthyl, 2-napthyl, or 2,1,3benozthiadiazolyl; wherein the quinolinyl, 1-napthyl, 2napthyl, or 2,1,3-benozthiadiazolyl may be substituted with one or more of F, Cl, Br, -CN, -NO₂, -NR₅R₆, -(CH₂)_nNR₅COR₅, - SO_2R_5 , - $(CH_2)_nCOR_7$, - $(CH_2)_nOR_5$, - $(CH_2)_nCONR_5R_6$, - $(CH_2)_nCO_2R_5$, -(CH₂)_nSO₂NR₅R₆, ethylenedioxy, methylenedioxy, chained or branched C_1-C_7 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl;

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with the proviso that when X is O and R_8 is $NR_9 (CH_2)_u O(CH_2)_u NR_{10} R_{11}$, R_{16} cannot be methyl;

wherein R_3 is independently H; $-(CH_2)_uOR_5$; $-(CH_2)_tCONR_5R_6$; $-(CH_2)_uNR_5COR_5$; $-(CH_2)_tCOR_7$; $-(CH_2)_tCO_2R_5$; $-(CH_2)_uNR_5R_6$; $-(CH_2)_uCN$; straight chained or branched C_1-C_7 alkyl; straight chained or branched C_2-C_7 alkenyl or alkynyl; or C_3-C_7 cycloalkyl or cycloalkenyl; phenyl, C_1-C_6 phenylalkyl, or C_1-C_6 heteroarylalkyl; wherein the phenyl, C_1-C_6 phenylalkyl or C_1-C_6 heteroarylalkyl may be substituted with one or more of F, Cl, Br, -CN, $-NO_2$, $-NR_5R_6$, $-SO_2R_5$, $-(CH_2)_nCOR_7$, $-(CH_2)_nOR_5$, $-(CH_2)_nCONR_5R_6$, $-(CH_2)_nNR_5COR_5$, $-(CH_2)_nCO_2R_5$, $-(CH_2)_nSO_2NR_5R_6$, straight chained or branched C_1-C_7 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl, straight chained or branched C_2-C_7 alkenyl or alkynyl, or C_3-C_7 cycloalkyl or cycloalkenyl;

wherein R_4 is independently H; $-(CH_2)_uOR_5$; $-(CH_2)_tCONR_5R_6$; $-(CH_2)_uNR_5COR_5$; $-(CH_2)_tCOR_7$; $-(CH_2)_tCO_2R_5$; $-(CH_2)_uNR_5R_6$; $-(CH_2)_uCN$; straight chained or branched C_1-C_7 alkyl; straight chained or branched C_2-C_7 alkenyl or alkynyl; or C_3-C_7 cycloalkyl or cycloalkenyl; phenyl or C_1-C_6 phenylalkyl; wherein the phenyl or C_1-C_6 phenylalkyl may be substituted with one or more of F, Cl, Br, -CN, $-NO_2$, $-NR_5R_6$, $-SO_2R_5$, $-(CH_2)_nCOR_7$, $-(CH_2)_nOR_5$, $-(CH_2)_nCONR_5R_6$, $-(CH_2)_nNR_5COR_5$, $-(CH_2)_nCO_2R_5$, $-(CH_2)_nSO_2NR_5R_6$, straight chained or branched C_1-C_7 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl, straight chained or branched C_2-C_7 alkenyl or alkynyl, or C_3-C_7 cycloalkyl or cycloalkenyl;

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> or R_{3} and R_{4} taken together with the nitrogen atom to which they are attached are 1-azetidinyl, 1-pyrrolidinyl, piperidinyl, or 1H-azepanyl, wherein the 1-azetidinyl, pyrrolidinyl, 1-piperidinyl, or 1H-azepanyl is substituted with one or more of F, -CN, -(CH₂)_nNR₅R₆, -SO₂R₅, -(CH₂)_nCOR₇, -(CH₂)_nCONR₅R₆, -(CH₂)_nNR₅COR₅,-(CH₂)_nCO₂R₅,- $(CH_2)_nOR_5$, straight chained or branched C_1 - C_7 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl, straight chained branched C_2 - C_7 alkenyl or alkynyl, or C_3 - C_7 cycloalkyl or cycloalkenyl, or phenyl or heteroaryl; wherein if $(CH_2)_nNR_5R_6$, $-(CH_2)_nOR_5$, or $-(CH_2)_nNR_5COR_5$ are 2 in the position, then n is not 0; wherein the phenyl or heteroaryl may be substituted with one or more of F, Cl, Br, -CN, -NO $_{2}$, $-NR_5R_6$, $-SO_2R_5$, $-(CH_2)_nCOR_7$, $-(CH_2)_nOR_5$, $-(CH_2)_nCONR_5R_6$, $(CH_2)_nNR_5COR_5$, $-(CH_2)_nCO_2R_5$, $-(CH_2)_nSO_2NR_5R_6$, straight chained or branched C_1 - C_7 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl, straight chained or branched $C_2\text{-}C_7$ alkenyl or alkynyl, or C₃-C₇ cycloalkyl or cycloalkenyl;

> or R_3 and R_4 taken together with the nitrogen atom to which they are attached are morpholinyl, thiomorpholinyl, [1,4] oxazepanyl, [1,4] thiazepanyl, piperazinyl, or [1,4] diazepanyl is optionally substituted with straight chained or branched C_1 - C_5 alkyl or $(CH_2)_tOR_5$; and wherein the nitrogen atom of the piperazinyl or [1,4] diazepanyl ring may be optionally substituted with $-(CH_2)_uOR_5$; $-COR_5$; straight chained or branched C_1 - C_5 alkyl; or phenyl; wherein the phenyl may be substituted with one or more of F, Cl, Br, -CN, $-NO_2$, $-NR_5R_6$, $-(CH_2)_nOR_5$, straight chained or

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branched C_1 - C_3 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl;

wherein R_{17} is H, straight chained or branched C_1 - C_4 alkyl, perfluoroalkyl, or polyfluoroalkyl;

wherein R_{19} is $-(CH_2)_nOR_5$, $-NR_5R_6$, phenyl or heteroaryl, wherein the phenyl or heteroaryl may be substituted with one or more of F, Cl, Br, -CN, $-NO_2$, $-NR_5R_6$, $-(CH_2)_nNR_5COR_5$, $-SO_2R_5$, $-(CH_2)_nCOR_7$, $-(CH_2)_nOR_5$, $-(CH_2)_nCONR_5R_6$, $-(CH_2)_nC_2OR_5$, $-(CH_2)_nSO_2NR_5R_6$, ethylenedioxy, methylenedioxy, straight chained or branched C_1-C_7 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl, straight chained or branched C_2-C_7 alkenyl or alkynyl, or C_3-C_7 cycloalkyl or cycloalkenyl;

wherein m is 0 or 1;

wherein each p independently is an integer from 0 to 2 inclusive;

wherein each r independently is an integer from 0 to 3 inclusive;

wherein each s independently is an integer from 1 to 6 inclusive;

wherein t is an integer from 1 to 4 inclusive;

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wherein each u independently is an integer from 2 to 4 inclusive;

wherein v is 1 or 2;

with the proviso that when v is 2, m is 0;

wherein z is an integer from 2 to 7;

or a pharmaceutically acceptable salt thereof to the subject, thereby alleviating the abnormality.

- 48. (New) The method of claim 47, wherein the abnormality is an eating disorder, obesity, bulimia nervosa, a sexual disorder, a reproductive disorder, depression, an epileptic seizure, hypertension, cerebral hemorrhage, congestive heart failure, or a sleep disturbance.
- 49. (New) A method of treating a subject suffering from an abnormality wherein the abnormality is alleviated by decreasing the activity of a human Y5 receptor comprising administering to the subject a therapeutically effective amount of a compound having the following structure:

$$R_1$$
 R_1
 R_1
 R_1
 R_1

wherein Y is O, S or NH;

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wherein each R_{14} is independently is H, F, Cl, Br, -CN, -OH, -NO₂, -NR₅R₆, -SO₂R₅, -(CH₂)_nOR₅, -SO₂C₆H₅, -SO₂NR₅R₆, -C₆H₅, -(CH₂)_nCONR₅R₆, -(CH₂)_nNR₅COR₅, ethylenedioxy, methylenedioxy, perfluoroalkyl, polyfluoroalkyl, aminoalkyl, or straight chained or branched C_1 - C_7 alkyl; or phenyl, heteroaryl or C_1 - C_7 phenylalkyl; wherein the phenyl, heteroaryl or C_1 - C_7 phenylalkyl may be substituted with one or more of F, Cl, Br, -CF₃, -CN, -NO₂, -NR₅R₆, -SO₂R₅, -(CH₂)_nOR₅, or straight chained or branched C_1 - C_4 alkyl; provided that if one R_{14} is phenyl, heteroaryl or C_1 - C_7 phenylalkyl, the other R_{14} is H;

wherein each R_1 independently is H, F, Cl, Br, -CN, -OH, -NO₂, -NR₅R₆, -SO₂R₅, -(CH₂)_nOR₅, -SO₂C₆H₅, -SO₂NR₅R₆, -C₆H₅, -(CH₂)_nCONR₅R₆, -(CH₂)_nNR₅COR₅, ethylenedioxy, methylenedioxy, perfluoroalkyl, polyfluoroalkyl, aminoalkyl, or straight chained or branched C_1 - C_7 alkyl; or phenyl, heteroaryl or C_1 - C_7 phenylalkyl; wherein the phenyl, heteroaryl or C_1 - C_7 phenylalkyl may be substituted with one or more of F, Cl, Br, -CF₃, -CN, -NO₂, -NR₅R₆, -SO₂R₅, -(CH₂)_nOR₅, or straight chained or branched C_1 - C_4 alkyl;

wherein R_2 is H, straight chained or branched C_1 - C_4 alkyl; - $(CH_2)_tOR_5$, phenyl, optionally substituted with one or more of F, Cl, Br, -CF₃, -CN, -NO₂, -NR₅R₆, -SO₂R₅, -(CH₂)_nOR₅, or straight chained or branched C_1 - C_4 alkyl;

wherein R_5 is independently H; or straight chained or branched $C_1\text{-}C_7$ alkyl;

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wherein R_6 is independently H; or straight chained or branched C_1 - C_7 alkyl;

wherein each n independently is an integer from 0 to 6 inclusive;

wherein R₈ is

i)
$$-\stackrel{R_9}{\underset{r}{\bigvee}}_{p}\stackrel{r}{\underset{R_{10}}{\bigvee}}_{R_{11}}$$
 or ii) $-\stackrel{R_9}{\underset{r}{\bigvee}}_{p}\stackrel{r}{\underset{R_{13}}{\bigvee}}_{R_{12}}$

provided that R_1 or R_{14} cannot be -OH, when R_8 is (ii);

wherein R_9 is independently H_7 or straight chained or branched C_1 - C_4 alkyl;

wherein R_{10} is independently H; or straight chained or branched C_1 - C_4 alkyl;

wherein R₁₁ is

wherein R_{12} is H, straight chained or branched C_1 - C_7 alkyl; or $(CH_2)_nOR_{17}$;

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wherein R_{13} is independently $-(CH_2)_uOR_5$; $-(CH_2)_tCONR_5R_6$; $-(CH_2)_uNR_5COR_5$; $-(CH_2)_tCOR_7$; $-(CH_2)_tCO_2R_5$; $-(CH_2)_uNR_5R_6$; $-(CH_2)_uCN$; straight chained or branched C_1-C_7 alkyl; C_1-C_7 alkyl in which the C_2-C_7 atoms may be optionally substituted with one or more F or Cl; C_3-C_7 cycloalkyl- C_1-C_7 alkyl; straight chained or branched C_2-C_7 alkenyl or alkynyl; or C_3-C_7 cycloalkyl; phenyl or C_1-C_6 phenylalkyl; wherein the phenyl or C_1-C_6 phenylalkyl may be substituted with one or more of F, Cl, -CN, $-NO_2$, $-NR_5R_6$, $-SO_2R_5$, $-(CH_2)_nCOR_7$, $-(CH_2)_nOR_5$, $-(CH_2)_nCONR_5R_6$, $-(CH_2)_nNR_5COR_5$, $-(CH_2)_nCO_2R_5$, $-(CH_2)_nSO_2NR_5R_6$, or straight chained or branched C_1-C_7 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl;

or R_{12} and R_{13} together with the amide linkage to which they are attached are pyrrolidinonyl, piperidonyl, or oxazolidinonyl;

wherein R_7 is independently straight chained or branched C_1 - C_7 alkyl;

wherein R_{16} is NR_3R_4 ; perfluoroalkyl, unsubstituted straight chained or branched C_1 - C_7 alkyl; substituted straight chained or branched C_2 - C_7 alkyl, wherein the C_2 - C_7 alkyl may be substituted with one or more of F, Cl, -CN, -NR₅R₆, - SO_2R_5 , - $(CH_2)_nCOR_7$, - $(CH_2)_nOR_5$, - $(CH_2)_nCONR_5R_6$, - $(CH_2)_nNR_5COR_5$, - $(CH_2)_nCO_2R_5$, - $(CH_2)_nOCF_3$, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl, straight chained or branched C_2 - C_7 alkenyl or alkynyl, or C_3 - C_7 cycloalkyl or cycloalkenyl; or phenyl, heteroaryl or C_1 - C_7 phenylalkyl; wherein the phenyl, heteroaryl or C_1 - C_7 phenylalkyl may be substituted with one

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or more of F, Cl, Br, I, -CN, -NO₂, -NR₅R₆, -(CH₂) $_{\rm n}$ NR₅COR₅, - SO_2R_5 , - $(CH_2)_nCOR_7$, - $(CH_2)_nOR_5$, - $(CH_2)_nCONR_5R_6$, - $(CH_2)_nCO_2R_5$, ethylenedioxy, methylenedioxy, straight (CH₂)_nSO₂NR₅R₆,branched C_1-C_7 alkyl, perfluoroalkyl, chained or polyfluoroalkyl, or aminoalkyl, straight chained or branched C_2 - C_7 alkenyl or alkynyl, or C_3 - C_7 cycloalkyl or cycloalkenyl; quinolinyl, 1-napthyl, 2-napthyl, or 2,1,3benozthiadiazolyl; wherein the quinolinyl, 1-napthyl, 2napthyl, or 2,1,3-benzothiadiazolyl may be substituted with one or more of F, Cl, Br, I, -CN, $-NO_2$, $-NR_5R_6$, - $(CH_2)_nNR_5COR_5$, $-SO_2R_5$, $-(CH_2)_nCOR_7$, $-(CH_2)_nOR_5$, $-(CH_2)_nCONR_5R_6$, $-(CH_2)_nCO_2R_5$, $-(CH_2)_nSO_2NR_5R_6$, ethylenedioxy, methylenedioxy, or straight chained or branched C₁-C₇ alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl;

wherein R_3 is independently H; $-(CH_2)_uOR_5$; $-(CH_2)_tCONR_5R_6$; $-(CH_2)_uNR_5COR_5$; $-(CH_2)_tCOR_7$; $-(CH_2)_tCO_2R_5$; $-(CH_2)_uNR_5R_6$; $-(CH_2)_uCN$; straight chained or branched C_1-C_7 alkyl; straight chained or branched C_2-C_7 alkenyl or alkynyl; or C_3-C_7 cycloalkyl or cycloalkenyl; or phenyl, C_1-C_6 phenylalkyl, or C_1-C_6 heteroarylalkyl; wherein the phenyl, C_1-C_6 phenylalkyl, or C_1-C_6 heteroarylalkyl may be substituted with one or more of F, Cl, Br, -CN, $-NO_2$, $-NR_5R_6$, $-SO_2R_5$, $-(CH_2)_nCOR_7$, $-(CH_2)_nOR_5$, $-(CH_2)_nCONR_5R_6$, $-(CH_2)_nNR_5COR_5$, $-(CH_2)_nCO_2R_5$, $-(CH_2)_nSO_2NR_5R_6$, straight chained or branched C_1-C_7 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl, straight chained or branched C_2-C_7 alkenyl or alkynyl, or C_3-C_7 cycloalkyl or cycloalkenyl;

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wherein R_4 is independently H; $-(CH_2)_uOR_5$; $-(CH_2)_tCONR_5R_6$; $-(CH_2)_uNR_5COR_5$; $-(CH_2)_tCOR_7$; $-(CH_2)_tCO_2R_5$; $-(CH_2)_uNR_5R_6$; $-(CH_2)_uCN$; straight chained or branched C_1-C_7 alkyl; straight chained or branched C_2-C_7 alkenyl or alkynyl; or C_3-C_7 cycloalkyl or cycloalkenyl; or phenyl or C_1-C_6 phenylalkyl; wherein the phenyl or C_1-C_6 phenylalkyl may be substituted with one or more of F, Cl, Br, -CN, $-NO_2$, $-NR_5R_6$, $-SO_2R_5$, $-(CH_2)_nCOR_7$, $-(CH_2)_nOR_5$, $-(CH_2)_nCONR_5R_6$, $-(CH_2)_nNR_5COR_5$, $-(CH_2)_nCO_2R_5$, $-(CH_2)_nSO_2NR_5R_6$, straight chained or branched C_1-C_7 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl, straight chained or branched C_2-C_7 alkenyl or alkynyl, or C_3-C_7 cycloalkyl or cycloalkenyl;

or R_3 and R_4 taken together with the nitrogen atom to which they are attached are 1-azetidinyl, 1-pyrrolidinyl, piperidinyl, or 1H-azepanyl, wherein the 1-azetidinyl, 1pyrrolidinyl, 1-piperidinyl, or 1H-azepanyl is substituted with one or more of F, -CN, -(CH $_2$) $_nNR_5R_6$, -SO $_2R_5$, -(CH $_2$) $_nCOR_7$, $-(CH_2)_nOR_5$, $-(CH_2)_nCONR_5R_6$, $-(CH_2)_nNR_5COR_5$, -(CH₂)_nCO₂R₅,straight chained or branched C_1 - C_7 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl, straight chained or branched C_2 - C_7 alkenyl or alkynyl, or C_3 - C_7 cycloalkyl or cycloalkenyl, or phenyl or heteroaryl; wherein if - $(CH_2)_nNR_5R_6$, $-(CH_2)_nOR_5$, or $-(CH_2)_nNR_5COR_5$ are in the 2position, then n is not 0; wherein the phenyl or heteroaryl may be substituted with one or more of F, Cl, Br, I, -CN, - NO_2 , $-NR_5R_6$, $-SO_2R_5$, $-(CH_2)_nCOR_7$, $-(CH_2)_nOR_5$, $-(CH_2)_nCON$ R_5R_6 , - $(CH_2)_nNR_5COR_5$, $-(CH_2)_nCO_2R_5$, $-(CH_2)_nSO_2NR_5R_6$, straight chained or branched C_1 - C_7 alkyl, perfluoroalkyl, polyfluoroalkyl, or

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aminoalkyl, straight chained or branched C_2 - C_7 alkenyl or alkynyl, or C_3 - C_7 cycloalkyl or cycloalkenyl;

or R₃ and R₄ taken together with the nitrogen atom to which morpholinyl, they are attached are thiomorpholinyl, [1,4]thiazepanyl, piperazinyl, [1,4] oxazepanyl, [1,4]diazepanyl, wherein the morpholinyl, thiomorpholinyl, [1,4]oxazepanyl, [1,4]thiazepanyl, piperazinyl, [1,4]diazepanyl is optionally substituted with straight chained or branched C_1-C_5 alkyl or $(CH_2)_tOR_5$; and wherein the nitrogen atom of the piperazinyl or [1,4]diazepanyl ring may be optionally substituted with -(CH₂)_uOR₅; -COR₅; straight chained or branched C1-C5 alkyl; or phenyl; wherein the phenyl may be substituted with one or more of F, Cl, Br, -CN, $-NO_2$, $-NR_5R_6$ $-(CH_2)_nOR_5$, straight chained or branched C_1 - C_3 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl;

wherein R_{17} is straight chained or branched C_1 - C_4 alkyl, perfluoroalkyl, or polyfluoroalkyl;

wherein each p independently is an integer from 0 to 2 inclusive;

wherein each r independently is an integer from 0 to 3 inclusive;

wherein t is an integer from 1 to 4 inclusive;

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wherein each u independently is an integer from 2 to 4 inclusive;

or a pharmaceutically acceptable salt thereof to the subject, thereby alleviating the abnormality.

- 50. (New) The method of claim 49, wherein the abnormality is an eating disorder, obesity, bulimia nervosa, a sexual disorder, a reproductive disorder, depression, an epileptic seizure, hypertension, cerebral hemorrhage, congestive heart failure, or a sleep disturbance.
- 51. (New) A method of treating a subject suffering from an abnormality wherein the abnormality is alleviated by decreasing the activity of a human Y5 receptor comprising administering to the subject a therapeutically effective amount of a compound having the following structure:

$$R_8$$

wherein each R_1 is independently H, F, Cl, Br, -CN, -OH, -NO₂, -NR₅R₆, -SO₂R₅, -(CH₂)_nOR₅, -(CH₂)_nCONR₅R₆, -(CH₂)_nNR₅COR₅, perfluoroalkyl, polyfluoroalkyl, aminoalkyl, or straight chained or branched C_1 - C_7 alkyl;

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wherein R_5 is independently H; or straight chained or branched C_1 - C_7 alkyl;

wherein R_6 is independently H; or straight chained or branched C_1 - C_7 alkyl;

wherein B is O, NH or S;

wherein X is S, SO or SO2;

wherein each n independently is an integer from 0 to 6 inclusive;

wherein R₈ is

$$-\stackrel{R_9}{\underset{r}{\bigvee}} \stackrel{r}{\underset{R_{10}}{\bigvee}} R_{11} \qquad \stackrel{\stackrel{\circ}{\underset{R_9}{\bigvee}} R_{11}}{\underset{z}{\bigvee}} R_{11}$$

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wherein Y is C or N;

wherein R_7 is independently straight chained or branched C_1 - C_7 alkyl;

wherein R_9 is independently H; straight chained or branched C_1 - C_4 alkyl;

wherein R_{10} is independently H; or straight chained or branched C_1-C_4 alkyl;

wherein R₁₁ is

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wherein R_{12} is H, straight chained or branched C_1 - C_7 alkyl, $(CH_2)_nOR_{17}$, or $O(CH_2)_uOR_{17}$;

wherein R_{13} is independently H; $-(CH_2)_uOR_5$; $-(CH_2)_tCONR_5R_6$; $-(CH_2)_uNR_5COR_5$; $-(CH_2)_tCOR_7$; $-(CH_2)_tCO_2R_5$; $-(CH_2)_uNR_5R_6$; $-(CH_2)_uCN$; straight chained or branched C_1-C_7 alkyl; C_1-C_7 alkyl in which the C_2-C_7 atoms may be optionally substituted with one or more F or Cl; C_3-C_7 cycloalkyl- C_1-C_7 alkyl; straight chained or branched C_2-C_7 alkenyl or alkynyl; or C_3-C_7 cycloalkyl; phenyl or C_1-C_6 phenylalkyl; wherein the phenyl or C_1-C_6 phenylalkyl may be substituted with one or more of F, Cl, -CN, $-NO_2$, $-NR_5R_6$, $-SO_2R_5$, $-(CH_2)_nCOR_7$, $-(CH_2)_nOR_5$, $-(CH_2)_nCOR_5R_6$, $-(CH_2)_nNR_5COR_5$, $-(CH_2)_nCO_2R_5$, $-(CH_2)_nSO_2NR_5R_6$, straight chained or branched C_1-C_7 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl;

or R_{12} and R_{13} together with the amide linkage to which they are attached are pyrrolidinonyl, piperidonyl, or oxazolidinonyl;

wherein R_{14} is H; straight chained or branched C_1 - C_4 alkyl; F; or $-(CH_2)_rOR_5$;

wherein R_{15} is H, straight chained or branched C_1 - C_4 alkyl, or F;

with the proviso that when R_{14} is -OH, R_{15} cannot be F;

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wherein R_3 is independently H; $-(CH_2)_uOR_5$; $-(CH_2)_tCONR_5R_6$; $-(CH_2)_uNR_5COR_5$; $-(CH_2)_tCOR_7$; $-(CH_2)_tCO_2R_5$; $-(CH_2)_uNR_5R_6$; $-(CH_2)_uCN$; straight chained or branched C_1 - C_7 alkyl; straight chained or branched C_1 - C_7 alkyl; or C_3 - C_7 cycloalkyl or cycloalkenyl; phenyl, C_1 - C_6 phenylalkyl or C_1 - C_6 heteroarylalkyl; wherein the phenyl, C_1 - C_6 phenylalkyl, or C_1 - C_6 heteroarylalkyl may be substituted with one or more of F, Cl, Br, -CN, $-NO_2$, $-NR_5R_6$, $-SO_2R_5$, $-(CH_2)_nCOR_7$, $-(CH_2)_nOR_5$, $-(CH_2)_nCONR_5R_6$, $-(CH_2)_nNR_5COR_5$, $-(CH_2)_nCO_2R_5$, $-(CH_2)_nSO_2NR_5R_6$, straight chained or branched C_1 - C_7 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl, straight chained or branched C_2 - C_7 alkenyl or alkynyl, or C_3 - C_7 cycloalkyl or cycloalkenyl;

wherein R_4 is independently H; $-(CH_2)_uOR_5$; $-(CH_2)_tCONR_5R_6$; $-(CH_2)_uNR_5COR_5$; $-(CH_2)_tCOR_7$; $-(CH_2)_tCO_2R_5$; $-(CH_2)_uNR_5R_6$; $-(CH_2)_uCN$; straight chained or branched C_1 - C_7 alkyl; straight chained or branched C_2 - C_7 alkenyl or alkynyl; or C_3 - C_7 cycloalkyl or cycloalkenyl; phenyl or C_1 - C_6 phenylalkyl; wherein the phenyl or C_1 - C_6 phenylalkyl may be substituted with one or more of F, Cl, Br, -CN, $-NO_2$, $-NR_5R_6$, $-SO_2R_5$, $-(CH_2)_nCOR_7$, $-(CH_2)_nOR_5$, $-(CH_2)_nCONR_5R_6$, $-(CH_2)_nNR_5COR_5$, $-(CH_2)_nCO_2R_5$, $-(CH_2)_nSO_2NR_5R_6$, straight chained or branched C_1 - C_7 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl, straight chained or branched C_2 - C_7 cycloalkyl or cycloalkenyl;

or R_3 and R_4 taken together with the nitrogen atom to which they are attached are 1-azetidinyl, 1-pyrrolidinyl, 1-

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piperidinyl, or 1H-azepanyl, wherein the 1-azetidinyl, 1pyrrolidinyl, 1-piperidinyl, or 1H-azepanyl is substituted with one or more of F, -CN, -(CH₂) $_{n}NR_{5}R_{6}$, -SO $_{2}R_{5}$, -(CH $_{2}$) $_{n}COR_{7}$, -(CH₂)_nCO₂R₅,- $(CH_2)_nCONR_5R_6$, -(CH₂)_nNR₅COR₅,- $(CH_2)_nOR_5$, straight chained or branched C_1 - C_7 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl, straight chained branched C_2 - C_7 alkenyl or alkynyl, or C_3 - C_7 cycloalkyl or cycloalkenyl, or phenyl or heteroaryl; wherein if - $(CH_2)_nNR_5R_6$, $-(CH_2)_nOR_5$, or $-(CH_2)_nNR_5COR_5$ are in the position, then n is not 0; wherein the phenyl or heteroaryl may be substituted with one or more of F, Cl, Br, -CN, -NO $_2$, $-SO_2R_5$, $-(CH_2)_nCOR_7$, $-(CH_2)_nOR_5$, $-(CH_2)_nCONR_5R_6$, $(CH_2)_nNR_5COR_5$, $-(CH_2)_nCO_2R_5$, $-(CH_2)_nSO_2NR_5R_6$, straight chained or branched C_1 - C_7 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl, straight chained or branched $C_2\text{-}C_7$ alkenyl or alkynyl, or C_3 - C_7 cycloalkyl or cycloalkenyl;

or R_3 and R_4 taken together with the nitrogen atom to which morpholinyl, thiomorpholinyl, are attached are [1,4]thiazepanyl, piperazinyl, [1,4]oxazepanyl, [1,4]diazepanyl, wherein the morpholinyl, thiomorpholinyl, [1,4]oxazepanyl, [1,4]thiazepanyl, piperazinyl, [1,4]diazepanyl is optionally substituted with $-(CH_2)_uCOR_5$; -COR $_5$; -CO $_2$ R $_5$; straight chained or branched C $_1$ -C $_5$ alkyl or $(CH_2)_{t}OR_5;$ and wherein the nitrogen atom of the piperazinyl or straight chained or branched C_1 - C_5 alkyl; or phenyl; wherein the phenyl may be substituted with one or more of F, Cl, Br, -CN, -NO₂, -NR₅R₆ -(CH₂) $_{\rm n}$ OR₅, straight chained or branched C_1 - C_3 alkyl, perfluoroalkyl, polyfluoroalkyl, or aminoalkyl;

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wherein R_{17} is straight chained or branched $C_1\text{-}C_4$ alkyl, perfluoroalkyl, or polyfluoroalkyl; wherein m is 0 or 1;

wherein each p independently is an integer from 0 to 2 inclusive;

wherein each r independently is an integer from 0 to 3 inclusive;

wherein each s independently is an integer from 1 to 6 inclusive;

wherein t is an integer from 1 to 4 inclusive;

wherein each u independently is an integer from 2 to 4 inclusive;

wherein v is 1 or 2;

with the proviso that when v is 2, m is 0;

wherein z is an integer from 2 to 7;

or a pharmaceutically acceptable salt thereof to the subject, thereby alleviating the abnormality.

52. (New) The method of claim 51, wherein the abnormality is an eating disorder, obesity, bulimia nervosa, a sexual

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disorder, a reproductive disorder, depression, an epileptic seizure, hypertension, cerebral hemorrhage, congestive heart failure, or a sleep disturbance.